

Claims:

1. A multiplexing arrangement in a network element of a telecommunications network, comprising

5 - a first interface unit (IFU) for receiving standard PCM signals in the network element, and

- multiplexing means (FMU) for multiplexing said PCM signals on a time-division basis into a transmission frame, the total capacity of the payload portion of the frame substantially corresponding to the capacity of N PCM signals,

10 characterized in that

- the multiplexing means are implemented as configurable in such a way that the total capacity of the payload portion can be divided between at least two parts of variable capacity in such a way that each part can be allocated a desired portion of the total capacity of the payload portion in accordance with the current transmission requirement, and that

15 - a part of the payload depending on the desired capacity is allocated to at least one traffic source from a group in which a number of PCM signals constitutes a first traffic source and a number of packet data streams constitutes a second traffic source.

20 2. An arrangement as claimed in claim 1, characterized in that a portion of the total capacity of the transmission frame corresponding to the capacity required by one PCM signal multiplied by an integer is allocated to all traffic sources using the same transmission frame.

25 3. An arrangement as claimed in claim 1, in which standard PCM signals and at least one packet data stream are received in the network element, characterized in that

- the total capacity of the payload portion is divided between M ($M < N$) PCM signals and one packet data stream, the data stream being allocated a capacity corresponding to $(N-M)$ PCM signals, and that

30 - rate adaptation by means of which the bit rate of the packet stream is adapted to correspond to the capacity allocated to it is performed on the packet stream.

4. An arrangement as claimed in claim 1, characterized in that at least one of the traffic sources is constituted by an ATM cell stream.

35 5. An arrangement as claimed in claim 3, characterized in that bits of each part are interleaved in the payload portion, and that of the bits

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of the payload portion, it is indicated bit-specifically whether they are allocated for the use of PCM signals or a packet data stream.

6. An arrangement as claimed in claim 1, characterized in that the capacity of the payload portion is entirely allocated for the use of one packet data stream.

7. A network element for a telecommunications network, comprising
- a first interface unit (IFU) for receiving standard PCM signals in the network element,

- multiplexing means (FMU) for multiplexing said PCM signals on a time-division basis into a transmission frame, the total capacity of the payload portion of the frame essentially corresponding to the capacity of N PCM signals,

characterized in that

- the multiplexing means are provided with configuring and allocating means (FMU, CU) (a) for dividing the total capacity of the payload portion between at least two parts of variable capacity in such a way that each part can be allocated a desired portion of the total capacity of the payload portion in accordance with the current transmission requirement, and (b) for allocating a part with the desired capacity to at least one traffic source from a group in which a number of PCM signals constitutes a first traffic source and a number of packet data streams constitutes a second traffic source.

8. A network element as claimed in claim 7, characterized in that the network element additionally comprises a second interface unit (AIU, TCU) for receiving a packet data stream, said interface unit comprising rate adaptation means (TCU) for adapting the bit rate of the packet data stream to correspond to the capacity of the payload portion allocated to the packet stream, the output of said rate adaptation means being directly connected to said multiplexing means.

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